TARGETED BROWNFIELD ASSESSMENT

For The

ELK CITY ARMORY

ASTM E 1527-05 Phase I Environmental Site Assessment All Appropriate Inquiry

Prepared by:



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I declare that to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of this part. I have specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. I have developed and performed the all appropriate inquiry in conformance with the standards and practices set forth in 40 CFR Part 312.

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Background and Disclaimer: The purpose of an environmental site assessment is to identify actual or potential "recognized environmental conditions" that may result in liability or land use restrictions. The ASTM Phase I Environmental Site Assessment E 1527 – 05 is the minimum standard for environmental due diligence in the commercial real estate industry and meets the standard for All Appropriate Inquiry under the Small Business Liability Relief and Brownfield Revitalization Act of 2002. A diligent effort in accordance with generally accepted good commercial and customary standards and practices was undertaken to identify the "recognized environmental conditions" that might affect the redevelopment project. However, the identification of old hazardous waste sites is an evolving process; therefore, DEQ cannot state with absolute certainty that no other potential hazardous waste sites are located in the area. In no event shall the DEQ or its employees be liable for any damages, injury, loss, cost or expense whatsoever arising in connection with the use or reliance on the information contained in this report, except as otherwise provided by law.

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1.0 Executive Summary

This Phase I Targeted Brownfield Assessment of the Elk City Armory was performed in accordance with the ASTM E 1527-05, a guide for conducting Environmental Site Assessments. Jonathan Reid of the Oklahoma Department of Environmental Quality (DEQ) performed the site reconnaissance on April 17, 2009.

The site is located in the Southwest ¼ of the Northeast ¼ of the Northwest ¼ of Section 22, Township 11 North, and Range 21 West Indian Meridian in Beckham County, Oklahoma. The site's address is 609 West E Avenue in Elk City, Oklahoma.

A cursory summary of findings is provided below. However, details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

- Suspect asbestos containing materials (ACM) was found throughout the Armory. Window putty observed between the windows externally and internally appeared to be suspect for ACM. The Drill Floor appeared to have ACM in the roof, exhaust pipes, and the fire door connected to the Maintenance Room. Several of the rooms in the main building east of the Drill Floor contained wrapped TSI utility piping, which is very likely to contain ACM. These rooms included: Hallway #7, Utility Room, Officers Latrine, Enlisted Latrine, Training Room, Locker Room, and the Classroom. The Utility room contained the same kind of exhaust pipes found in the Drill Floor, which were found leading up to the ceiling from the boiler and to the furnace. Twelve-inch floor tile was observed in the entrance of the Classroom and the whole floor of the Day Room. The twelve-inch floor tile is unlikely to have ACM; however, the mastic binding the floor to the floor tile could be suspect for ACM. The suspect ACM inside the Armory constitutes a Recognized Environmental Condition (REC).
- Several areas of the Armory were observed that may contain lead-based paint. Externally, eight cone-like metal structures were observed along the corners of the brick wall next to the overhead doors of the Drill Floor and Maintenance Room. The white paint on these structures was deteriorating and appeared to be suspect for lead-based The metal surfaced doors and overhead doors, internally and externally, are suspect for lead-based paint. This is especially relevant in the Drill Floor and Maintenance Room where the paint has deteriorated. The overhead door frames located at the Drill Floor and Maintenance Room; the fire door located between the Drill Floor and Maintenance Room; and a metal-surfaced window compartment located on the east side of the Drill Floor have suspect lead-based paint. Red primer was observed on the floors of the Maintenance Room and Hallway #7, the fire door, and the overhead doors. A yellow primer painted line formed in a rectangular shape was observed along the Drill Floor. The two primers are suspect for lead-based paint. The Supply Room contained green and white painted steel pipe that could be suspect for lead-based paint. The suspect lead based paint throughout the building constitutes a REC.
- There may be a potential for mold growth due to the age of the Armory, humidity, and possible water seepage.

- On September 25, 1995, a 1,000 gallon diesel underground storage tank (UST) was removed and disposed of at the Northern Oklahoma Metals facility, which is a scrapping/disposal company. Two confirmation soil samples were collected at the bottom of the excavated pit in the center and east sidewall for the analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX) and total petroleum hydrocarbons (TPH). Both sample results were below the OCC and DEQ Residential soil screening levels for BTEX and TPH.
- One LUST site, In "N" Out Express, was reported as being located within the ASTM's minimum search distance of ½ mile of the subject property. The facility is located at 1220 Colorado Avenue approximately 0.43 mile east-northeast of the subject property. Three 6,000 gallon gasoline leaking USTs were removed.
- Fluorescent light bulbs were found in the light fixtures throughout the Armory building.
 The bulbs contain mercury. Some of the light bulbs had green tips and the others did not
 have green tips. Fluorescent light bulbs with green tips are nonhazardous whereas other
 fluorescent light bulbs may be hazardous. Mercury contained in green tipped fluorescent
 light bulbs is not leachable through toxicity characteristic leaching procedure (TCLP)
 analysis, which makes them nonhazardous.
- Four heating, ventilation, and air conditioning (HVAC) systems, a furnace, and a boiler were found inside the Armory. The Drill Floor, Maintenance Room, Supply Room, and Utility Room contain the units. There may be a potential for the HVAC systems to contain chlorofluorocarbons (CFCs). These compounds are used in HVAC systems.
- According to two former employees of the Elk City Armory, there were no known chemical or petroleum spills on the property. The only chemicals used at the facility were for housekeeping purposes.
- One transformer was observed behind the subject property. The transformer appeared to be in good condition. Transformers are known to have polychlorinated biphenyls (PCBs).
 PCBs are mixtures of chemicals that form clear to yellow, oily liquids, or mixtures that form white, crystalline (sand-like) solids and hard resins. They were used in electrical equipment until their regulation in 1977.
- According to the Oklahoma Water Resources Board Water Well Record database, there are no wells present on the subject property or adjacent properties. One well is reported within 0.5 mile of the Armory. The well is approximately 0.40 mile west of the Armory.
- No National Priorities List NPL or delisted NPL sites, active Comprehensive Environmental Response, CERCLIS site listings, RCRA CORRACTS and non-CORRACTS TSD listings, ERNS list, State-equivalent NPL or CERCLIS lists, or State landfills and/or solid waste disposal sites were found on the subject property or within the ASTM minimum search radii. No archived CERCLIS site listings, RCRA generators, or VCP sites were found on the subject property or the minimum search radii. No Brownfield sites were found on the subject property and the minimum search radii either.

- The Oklahoma Corporation Commission's (OCC) oil and gas records database did not have any oil and/or gas well records within a mile of the subject property.
- The site is not on any Federal or State institutional controls (IC)/engineering controls (EC) Registries. The Elk City Armory representatives of the property were not aware of any ICs or ECs on the property.
- The subject property is on the DEQ's Site Cleanup Assistance Program list for environmental cleanup.

2.0 INTRODUCTION

The Oklahoma DEQ under a Brownfield Assistance Agreement (No. RP96681001-0) (Ref. 1) with the U.S. Environmental Protection Agency (EPA) conducted a Targeted Brownfield Assessment of the Elk City, Oklahoma National Guard Armory. The property will be used for community events.

2.1 Purpose

The purpose of this assessment is to look at the environmental conditions within the target area and provide this information to the City of Elk City to assist in its revitalization planning as well as meet the All Appropriate Inquiry requirement of the landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), better known as Superfund – Ref. 2), as provided in the Small Business Relief and Brownfield Revitalization Act of 2002 (Public Law 107-118, Subtitle B – Ref. 3). The purpose of a Phase I Environmental Site Assessment is to identify, to the extent feasible, recognized environmental conditions in connection with the target property through a systematic review of readily available information sources and a site reconnaissance. The Phase I will also be used to guide DEQ's cleanup efforts at the Armory.

The DEQ is providing technical assistance to the project by evaluating the environmental condition of the property prior to the City acquiring the property. Funding for this assessment has been provided by the U.S. EPA.

2.2 Detailed Scope-of-Services

The DEQ examined the current use of the property and then identified the historical uses of the property to determine if recognized environmental conditions exist. The DEQ examined historical documents, governmental databases, oil and gas records, aerial photographs, Sanborn Fire Insurance Maps, and conducted interviews, and a site reconnaissance of the area. A good faith effort was made to identify possible environmental conditions that might affect the revitalization of the property.

2.3 Significant Assumptions

The term "recognized environmental condition" as defined by ASTM E 1527-05 Standards, is "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions.

2.4 Limitations and Exceptions

The purpose of an environmental site assessment is to identify actual or potential "recognized environmental conditions" that may result in liability, land use restrictions, or cause delays in revitalization. The ASTM Phase I Environmental Site Assessment E 1527 - 05 (Ref. 4) is the minimum standard for environmental due diligence in the commercial real estate industry and meets the standard for All Appropriate Inquiry under the Small Business Liability Relief and the Brownfield Revitalization Act of 2002. A diligent effort in accordance with generally accepted good commercial and customary standards and practices was undertaken to identify the "recognized environmental conditions" that might affect the revitalization project. However, the identification of old hazardous waste sites is an evolving process; therefore, DEO cannot state with absolute certainty that no other potential hazardous waste sites are located in the area. assessment was conducted under constraints of time, cost, and scope and reflects a limited investigation and evaluation. It reflects the normal degree of care and skill that is ordinarily exercised by environmental professionals conducting business in this or similar localities. In no event shall the DEQ or its employees be liable for any damages, injury, loss, cost or expense whatsoever arising in connection with the use or reliance on the information contained in this report, except as otherwise provided by law.

The information in this report is based on a review of governmental records, interviews with knowledgeable residents in the community, information provided by the City of Elk City, the Oklahoma Military Department, and observations of the environmental professional. The result of this assessment, as written in this report, is valid as of the date of the report. The assessment does not include sampling of soil, groundwater, surface water, or air.

2.5 Special Terms and Conditions

Certain conditions are beyond the scope of ASTM Phase I Environmental Site Assessments and are therefore outside the scope of this assessment, unless specifically addressed in this report. Those conditions include but are not limited to:

- Radon
- Lead-Based Paint
- Regulatory Compliance
- Cultural and Historic Resources Industrial Hygiene
- Health and Safety
- Radioactive Materials under the Jurisdiction of the Nuclear Regulatory Commission
- Ecological Resources
- Indoor Air Quality
- High Voltage Power Lines
- Environmental Permitting Issues
- ACM
- Wetland and Endangered Species

3.0 SITE CHARACTERIZATION AND HISTORY

3.1 Location and Legal Description

The subject property is located on 609 West E Avenue in Elk City, Oklahoma. The site's legal location is in the Southwest ¼ of the Northeast ¼ of the Northwest ¼ of Section 22, Township 11 North, and Range 21 West Indian Meridian. A site map of the property is provided in Appendix A of this report.

3.2 Site and Vicinity Characterization

The Elk City Armory is located in north central Elk City in an area surrounded by residences. The site is located off of West E Avenue to the north and an alley lies north of the Armory. A residence is located adjacent to the west and an open area of grassland is east of the Armory building and fence line.

The Armory is a one-story building composed of a Drill Floor and Maintenance area to the west side and training rooms and latrines to the east. A fenced-in, open gravel/grass covered area is located north of the main building of training rooms and latrines. The Drill Floor area was created in 1947 and the main building area to the east was created in 1956.

A review of the topographical map indicated that the surface elevation of the site is approximately 1950 feet above mean sea level. The topographical gradient appears to be to the east-southeast towards a tributary of Elk Creek. The tributary of Elk Creek is approximately 0.20 mile southeast of the Armory. The topographical map is provided in Appendix A.

3.3 Description of Structures, Roads, and Other Improvements

The structure of the Armory is in good condition. The roof of the Drill Floor is in good condition as well. There are several areas located in the Drill Hall and Maintenance area, which may contain lead-based paint contamination. Based on past armory inspections, there is a likelihood of lead-based paint on the painted metal surfaces of the metal pipe inside the Supply Room east of the Drill Floor. ACM was found mainly in the main building area. Thermal insulation was the main item found that is potentially composed of asbestos. Details of each area of concern are explained more in Section 5.4 Internal Observations.

West E Avenue and the alley north of the Armory are in good condition. All pavement is constructed of asphalt. No improvements were observed during the site reconnaissance.

3.4 Owner, Property Manager, and Occupant Information

The subject property is owned by the Oklahoma Department of Environmental Quality. The DEQ Site Cleanup Assistance Program (SCAP) is in charge of identifying environmental hazards and conducting the cleanup of the Armory.

3.5 Information Reported by User Regarding Environmental Lien or Specialized Knowledge or Experience

Former Elk City Armory National Guard members, Richard Gay and Rodney Vincent, reported no environmental liens on the subject property. Mr. Gay had been stationed at the Armory from 1998 to September of 2007. Mr. Vincent had been station at the Armory from the early 1980s until 2007. Neither gentleman had any specialized knowledge regarding environmental conditions at the subject property.

A 1,000 gallon diesel underground storage tank (UST) was removed on September 25 1995 south of the Armory building. No leaks or free product of diesel was observed or detected in the confirmation soil results. The DEQ conducted a search for environmental liens at the Beckham County Courthouse. No environmental liens or use limitations were reported for the subject property.

3.6 Commonly Known or Reasonably Ascertainable Information

Mr. Gay and Mr. Vincent did not have any commonly known or reasonably ascertainable information within the local community about possible environmental conditions on the property.

3.7 Valuation Reduction for Environmental Issues

Valuation of the property is outside the scope of this assessment. A professional appraiser should be consulted to place a value on the property.

3.8 Current Use of the Property

Currently, the Armory is vacant and not being used. The property will be transferred to the City of Elk City following environmental cleanup by the DEQ Site Cleanup Assistance Program.

3.9 Past Use of the Property

3.9.1 Review of Aerial Photographs

Historic aerial photographs were searched to view the changes to the property over time. Aerial photographs from 1941, 1955, 1995, and 2008 were obtained. The earliest aerial photograph on record for the subject property was taken in 1941. This photograph was obtained from the Oklahoma Department of Libraries. The succeeding aerial photograph, taken in 1955, was obtained from the archived aerial photographs at the DEQ. The 1995 and 2008 aerial photographs were obtained from the DEQ Data Viewer. All these photographs are located in Appendix B. The following represents a summary of what was found at the subject property from each photograph.

1941 aerial photograph

The Elk City Armory was not present in November 14, 1941. Open farm land covered the west end of the present-day Armory. A barn-like structure and a residence covered the east end of the present-day Armory. West E Avenue was not developed due west of North Oliver Avenue, which runs north and south on the southeast corner of the subject property. All adjacent properties to the north, south, and west were open farmland. An additional residence was adjacent to the east followed by more farm land.

1955 aerial photograph

The Drill Floor was present on July 29, 1955. A road leads to the Drill floor from the developed West E Avenue. Grassland occupied the east area of the present-day Armory. The area that was once composed of open farmland was fully developed into a neighborhood of residences. Residences were adjacent to the subject property in the north east, west, and southeast areas. Open grassland occupied the adjacent area south of West E Avenue.

1995 aerial photograph

The Subject property appears to be the same in 1995 as it appears today. The Drill Floor and main building area are located on the west area of the property and an open grass covered field with a gravel drive-way is located at the east end of the property. The gravel drive-way leads into the fenced-in area behind the Armory building. An alley is located to the north of the subject property. Residences are adjacent on all sides of the subject property.

2008 aerial photograph

Nothing appears to have changed from 1995 to 2008. Everything appears to have stayed the same on the subject property and adjacent properties.

3.9.2 Fire Insurance Maps

Sanborn Fire Insurance maps were viewed from the Oklahoma Department of Libraries website. The maps dated from April 1904 through 1931. All Sanborn maps on record for Elk City, OK did not have the location of the subject property. No Sanborn maps were found dated after 1931. The subject property may have not been a part of Elk City during the time the available Sanborn maps were created. The Armory was not constructed until 1947.

3.10 Current and Past Uses of Adjoining Properties

Adjoining properties surrounding the Armory are all residences. Before development into a neighborhood all adjacent properties were composed of open farmland. No industrial properties are known to have existed at the adjoining properties.

3.11 Environmental (Physical) Setting

The DEQ reviewed several sources to obtain information on the physical setting of the subject property and its surrounding areas. These sources include: The United States Department of Agriculture (USDA) Beckham County Web Soil Survey, Oklahoma Geological Survey, and the Federal Emergency Management Association. Review of the physical setting of the area is to evaluate the sensitivity of the hydrogeology to potential contamination from sources either on or near the site.

3.11.1 Surface Water Characteristics

The elevation at the Elk City Armory is approximately 1950 feet. The subject property is relatively flat and the general topographical gradient appears to be to the east-southeast. There are no surface water bodies on the subject property. The water body is a tributary of Elk Creek approximately 0.20 mile southeast of the Armory.

According to the Federal Emergency Management Agency, the subject property is located in Zone X. This area is determined to be outside the 0.2% annual chance floodplain. All adjacent properties are outside the 0.2% annual chance floodplain as well. A flood insurance rate map of this information is located in Appendix C.

3.11.2 Subsurface Geological Characterization

The subject property is located in the Western Redbed Plains consisting of gently rolling hills of flat lying red Permian sandstones and shales. According to the USDA Natural Resources Conservation Service Web Soil Survey, the subject

property consists of the Grandfield Fine sandy loam (1 to 3 percent slopes). This soil was developed from loamy alluvium and/or eolian deposits of sand sheets on paleoterraces. The soil is well drained and available water capacity is moderate at about 8.2 inches. A soil map and a more detailed description of the soil type are provided in Appendix D.

3.11.3 Groundwater Characteristics

The subject property is located in the Anadarko Basin, which is composed of sedimentary rocks from the Cambrian through Permian ages. The major source of groundwater for Elk City is the Elk City Sandstone Aquifer. The Armory and adjoining properties overly the aquifer. Maximum yield of the Elk City Sandstone Aquifer is 150 gallons per minute and the mineral content of the water is low to moderate.

The direction of the hydraulic gradient is unknown. The direction of shallow groundwater flow is often related to the surface topography. Therefore, the expected shallow groundwater flow direction would likely be to the east-southeast based on the topography of the site.

3.11.4 Air Characteristics

No air emissions were noticed at the subject property or the adjoining properties. No significant odors were noticed at the subject property during the site visit. Several rooms in the main building have thermal insulation coated piping located near the ceilings. The thermal insulation is suspect for asbestos, which could be airborne where the insulation is torn. There may be the potential for mold growth due to the age of the Armory, humidity, and possible water damage.

4.0 RECORDS REVIEW

A regulatory database search was conducted by the DEQ. This search included, at a minimum, those records and distances from the site dictated as appropriate in the ASTM standard. The DEQ performed a review of available federal and state databases to assess whether the subject property or proximate properties were listed as having environmental concerns, which could have an adverse impact on the subject property. The following provides a summary of the databases reviewed.

4.1 Federal National Priorities List (NPL)

The EPA database was searched for NPL sites near the subject property within the ASTM's recommended search radius of one mile. The subject property is not a listed NPL site. There are no NPL sites reported within a one-mile radius of the subject property.

There is also an EPA database for delisted NPL sites, which ASTM requires to be reported within ½ mile of the subject property. No delisted NPL sites are within the ½ mile search radius.

4.2 Federal CERCLIS List

The EPA database for Comprehensive Environmental Response, Compensation and Liability Act Information System (CERCLIS) was searched for active and archived CERCLIS sites on and near the subject property. The ASTM's recommended search radius of the subject property for both active and archived CERCLIS sites is ½ mile. No active CERCLIS sites were found within ½ mile of the subject property. No archived CERCLIS sites were found within ½ mile of the subject property.

4.3 Federal RCRA CORRACTs List

The EPA database for Resource Conservation and Recovery Act (RCRA) facilities subject to corrective action was searched within the ASTM's required minimum distance of one mile of the subject property. No RCRA CORRACT facilities are within the one-mile radius of the subject property.

4.4 Federal RCRA non-CORRACTS TSD List

The EPA database for RCRA facilities not subject to corrective action was searched within the ASTM's required minimum distance of ½ mile of the subject property. No RCRA non-CORRACT Treatment, Storage and Disposal (TSD) sites are within the ½ mile radius of the subject property.

4.5 Federal RCRA Generators List

The EPA RCRA Notifiers database was searched for RCRA generators within the ASTM's required minimum search distance of the subject property. The minimum distance is the property and adjoining properties. The subject property did not have any RCRA Notifiers or generators. No RCRA Notifier facilities are on any of the adjacent properties.

4.6 Federal ERNS List

The Emergency Response Notification system (ERNS) maintained by the National Response Center was searched for any hazardous substance releases or spills within the subject property. ASTM requires a minimum search distance of the property only when identifying ERNS cases. No ERNS sites were reported within the property or the adjoining properties.

4.7 Federal Institutional Control/Engineering Control Registries

There are no known Institutional Controls/Engineering Controls on the subject property according to the representatives of the subject property and the County Clerk records of Beckham County.

4.8 State-Equivalent NPL

The DEQ does not have a State-equivalent NPL database. Oklahoma does not have a State Superfund law to establish a State-equivalent NPL database.

4.9 State-Equivalent CERCLIS

The DEQ does not have a State-equivalent CERCLIS database.

4.10 State Landfill and / or Solid Waste Disposal Sites

The DEQ regulates landfills and solid waste disposal sites across the State of Oklahoma. State landfills and solid waste disposal facilities were searched in the DEQ database within the ASTM required minimum distance of ½ mile from the subject property. No permitted landfills or solid waste disposal facilities are located within the search distance of the subject property.

4.11 State Leaking UST List

The OCC's UST Notification Database was searched to locate any known leaking underground storage tanks (LUSTs) sites located within the ASTM's minimum search distance of a ½ mile of the subject property. One LUST site is listed within the ½ mile radius. The following is the listed LUST site.

• In "N" Out Express (Facility ID: 0-504822) is located at 1220 Colorado Avenue approximately 0.43 mile east-northeast of the subject property. The latitude is 35° 25' 17.211" and longitude is -99° 24' 11.321". Three tanks out of six USTs were removed on February 5, 1992. All LUST tanks removed held gasoline with a holding capacity of 6,000 gallons each. The remaining 12,000, 6,000, and 4,000 gallon gasoline USTs are still in use and in good condition.

4.12 State Registered UST Sites

The OCC UST Notification Database was searched to locate registered USTs located within the ASTM's minimum search distance of the subject property and its adjoining properties. There was one registered UST listed at the subject property. Below is the description and history of the UST.

An Oklahoma Military Department owned UST (ID number: 0-505807), was once located approximately nine feet south of the building and 45 feet east of the west end of

the building. The UST, which was a 1,000-gallon diesel tank, was installed in 1957. It became permanently out of service in July 1988. No fuel had been purchase or pumped since that date.

On September 25, 1995, the UST was removed and disposed of at the Northern Oklahoma Metals facility, which is a metal scrapping/disposal company. Two confirmation soil samples were collected at the bottom of the excavated pit in the center and east sidewall. Samples were analyzed for BTEX and TPH. Both samples had non-detect concentrations below the OCC and DEQ Residential soil screening levels for BTEX and TPH. The OCC Tank Removal and Closure Report of the UST are provided in Appendix E.

4.13 State Institutional Control/Engineering Control Registries

The State Institutional Control/Engineering Control Registry is currently under development by the DEQ. There are no known Institutional Control/Engineering Controls in effect for this property.

4.14 State Voluntary Cleanup Sites

The DEQ Voluntary Cleanup Program (VCP) database was searched for VCP sites within the required ASTM search distance of ½ mile of the subject property. No VCP sites are located on or within ½ mile of the Elk City Armory.

4.15 State Brownfield Sites

The DEQ Brownfield database was searched for Brownfield sites within the required ASTM search distance of ½ mile of the subject property. No Brownfield sites are located on or within ½ mile of the Elk City Armory.

4.16 Oil and Gas Records

The DEQ performed a search of oil and gas records from the OCC's oil and gas records database. The database did not have any oil and/or gas well records within a mile of the subject property.

5.0 SITE RECONNAISSANCE AND INTERVIEWS

5.1 Methodology and Limiting Conditions

A site reconnaissance of the subject property, located at 609 West E Avenue, was performed on April 17, 2009. Jon Reid of the DEQ examined all the rooms inside the building and the outside area of the subject property for any recognized environmental conditions. All areas of the subject property were accessible. There were no limiting conditions during the site reconnaissance.

5.2 General Site conditions

The Drill Floor area was built in 1947 and the main building was built in 1956. The following are general site conditions that were investigated on the property.

Aboveground Storage Tanks (ASTs)

No ASTs are on the subject property or adjacent properties.

Landfills and/or Dumping

No landfills, dumping, or disturbed soil was found on the property.

Impoundments

No impoundments are on the subject property and the adjacent properties.

Monitoring Wells

According to the Oklahoma Water Resources Board Water Well Record database, there are no wells present on the subject property or adjacent properties. One well is reported within 0.5 mile of the Armory. The well is approximately 0.40 mile west of the Armory in the Southeast ¼ of the Northeast ¼ of Section 21 Township 11 N and Range 21 West Indian Meridian. This groundwater well is a domestic well with a total depth of 140.5 feet and a first water zone of 40 feet below ground surface. Estimated yield is approximately 15 gallons per minute. The Oklahoma Water Resources Board well ID is 21360.

Disturbed and Stained Soils

No disturbed and/or stained soils were observed at the subject property. There was no stressed vegetation of concern either. Areas where it was bare consisted of vehicle pathways of loose gravel and sand.

Seeps

No seeps were observed at the subject property. The Armory does not have an indoor firing range or subsurface rooms that could allow the potential for water seepage.

Chemical Spills

No chemical spills were observed at the subject property.

Farm Waste

No farm waste was observed at the subject property.

Known Pesticide Misapplication

No evidence of pesticide misapplications were observed during the site visit.

Discharges and Runoff from Adjacent Property Affecting the Site

No discharges and/or runoff were observed from any of the adjacent properties that would affect the subject property.

Petroleum Products

No petroleum products are located inside the Armory or on the premises of the property.

Asbestos

Since the Elk City Armory was built before the 1970s, there is a high potential of finding ACM inside the building. The U.S. began banning the use of asbestos in most building products in the 1970s due to studies confirming the harmful health effects caused by exposure to airborne asbestos. ACM may be found in the insulation wrapping of the heating pipes and/or heaters, roofing materials, exhaust pipes, window putty, floor tile mastic, and floor tiles. Floor tiles that are 9 x 9 inches have been found to contain ACM in most cases.

The building may contain ACM. It is very likely that the thermal insulation observed throughout the main building area contains ACM. The roofing material and exhaust pipes inside the Drill Floor have the potential of containing ACM. Window putty found between the small rectangular windows is also suspect of ACM. There was 12" x 12" floor tile observed in the Day Room and the Classroom. No nine-inch floor tile was observed. It is unlikely that the 12" x 12" floor tile contains ACM, however, it is possible. Other structures observed in the building that may contain ACM are the Fire Door connecting the Drill Floor and Maintenance Room; the exhaust pipe connecting the furnace to the ceiling in the Utility Room; and the cylinder pipe leading up to the ceiling from the boiler inside the Utility Room.

Lead-Based Paint

Lead-based paint was commonly used until 1978, when its use in residential paints was restricted in the United States. There is high probability that the Elk City Armory has lead-based paint. A red primer was found on the floor surfaces of the Maintenance Area, Hallway #7, and some of the metal surface doors and overhead door frames. A yellow primer was found on the Drill Floor surface floor. Both of these primers typically contain lead-based paint past investigations of armories have shown. All the metal painted surfaces (doors and piping) and wooden doors may contain lead-based paint due to the Armory's age. DEQ's contractor will perform a lead-based paint survey to determine the presence of lead-based paint in the building.

Mercury

The Armory contained several fluorescent light bulbs, which contain small amounts of mercury. Some bulbs had green tips at the ends whereas some did not. The bulbs with green tips have been shown by analysis not to leach mercury and therefore may be thrown in the municipal trash.

Transformers/PCB Equipment

One transformer was observed behind the subject property. The transformer appeared to be in good condition. Transformers are known to have PCBs. PCBs are mixtures of chemicals that form clear to yellow, oily liquids, or mixtures that form white, crystalline (sand-like) solids and hard resins. They were used in electrical equipment until their regulation in 1977.

5.3 External Observations

Externally, the Armory building was in good condition. There were several cone-like metal structures along the corners of the brick wall where the overhead doors are located. Some of these structures, primarily outside the Maintenance Area, had areas of white paint deterioration. Rust accumulation was observed and it appears that the structures may contain lead-based paint. The outside building windows contained putty that is suspect for asbestos. A metal surfaced door located on the north side of the Maintenance Area was observed to be suspect for lead-based paint. Due to the appearance of the overhead door of the Maintenance Area and the outside door of Hallway #7, there could be a potential for lead-based paint.

An historical UST was once located approximately nine feet south of the Supply Room. The area is now grassed over with no stressed vegetation. A fire hydrant is located on the southeast corner of the subject property and a foot-long grey metal pipe was found sticking out of the ground next to the east fence line.

No stressed vegetation or stained soils were observed except in an area where there was vehicle traffic. This area contained loose gravel. Adjacent properties surrounding the subject property are all residences. Photographs of the external view of the site can be found in Appendix F.

5.4 Internal Observations

The Elk City Armory is a one-story building with no subsurface rooms or an indoor firing range. Rooms in the Elk City Armory include the following: Drill Floor, Maintenance Area, Supply Room, Vault, Orderly Room, Meeting Groom, Commander Room, Entrance Hallway, Recruiter's Office, Day Room, Hallway #7, Utility Room, Officers Latrine, Enlisted Latrine, Training Room, Locker Room, Classroom and the main east and west hallway. Each room is described in the following paragraphs.

The Drill Floor is located on the west end of the building. The roof was in good condition. Exhaust pipes were observed at the Drill Floor in each corner of the four corners. These exhaust pipes as well as the roof are suspect for ACM. Two HVAC Janitrol units are located on the southwest and northeast corners of the Drill Floor. Three metal doors, a metal window compartment opening and a fairly new overhead door are located on the east end of the Drill Floor. Due to the metal surfaces and their age, there could be a potential for lead-based paint. A fire door that connects the Drill Floor's north end to the Maintenance Area was observed having red primer, which is suspect for lead-based paint. Fire doors are also known to contain asbestos. The red primer was also observed on the overhead door frames and a door located on the west end of the Drill Floor. Another suspected lead-based paint area is located on Drill Floor. A yellow painted line is formed in a shape of a rectangle along the Drill Floor. The Drill Floor has six small rooms to the west that are empty. Fluorescent lights were observed in which there were ten bulbs without green tips and two bulbs with green tips.

The Maintenance Area is located north of the Drill Floor. The structure of the area was in good condition. The steel-roof beams appeared to be in good shape. An area on the southwest corner of the room contained red primer, which is suspect for lead-based paint. Patches of paint were observed in other areas too. The fire door, overhead door frame on the east, and a steel door to the north all were observed to be suspect for lead-based paint as well. One Sterling HVAC unit was observed near the fire door.

The Supply Room is located on the south side of the building adjacent and east of the Drill Floor. This room has a wood ceiling. Near the ceiling there are green and white colored metal piping. No thermal insulation was observed that would suggest ACM. However, the paint may contain lead-based paint. A Reznor HVAC unit is located in the northeast corner of the Supply Room. There is a metal surface door on the north side of the room. The door did not appear to be suspect for lead-based paint. The Vault is connected to the Supply Room to the east. The Vault did not appear to have any concerns. The Vault had four green tipped fluorescent light bulbs.

Hallway # 7 is located on the north side of the building adjacent and east of the Drill Floor. This room has a few places of red primer on the floor. The room also contains thermal system insulation (TSI) along several pipes located on the north end. The TSI is suspect for asbestos. There is a metal surfaced exit door on the north end, but does not appear to be suspect for lead-based paint.

The Utility Room is located east of Hallway #7. This room contains a boiler, two green tipped fluorescent light bulbs, thermal insulated piping, bare metal piping, and a Weather King Gas furnace. The cylinder pipe leading up to the ceiling from the boiler appeared to contain ACM as well as the TSI on the utility piping and an exhaust pipe connected to the furnace. A black oily liquid was observed along the boiler pipe leading up to the ceiling. A floor drain was observed in this room.

The Officers Latrine and the Enlisted Latrines are east of the Utility Room. Thermal insulated pipe extends across both rooms. Four non-green fluorescent light bulbs were observed in the Officer's Latrine. Two floor drains were observed in the Enlisted Latrine. Metal surfaced doors observed in these rooms and the rest of the main building area did not appear to have lead-based paint.

The following rooms, adjacently east of the latrines, consists of the Training Room, Locker Room, and Classroom. All three rooms contain a thermal insulated pipe extending along the top portion of the wall and ceiling. The pipe does not appear in the Classroom because the ceiling is below it. The Classroom had an additional area of thermal insulated piping along the wall on the east end. The Training Room contains three green and three non-green fluorescent light bulbs. The Locker Room contains sixteen non-green fluorescent light bulbs. The Classroom contains sixteen fluorescent light bulbs. It is unknown whether these are green or non-green tipped bulbs. The entrance into the Classroom from the main hallway contains twelve-inch floor tile. All floor tiles were in good condition.

The Orderly Room is located adjacently east of the Supply Room. Connected to this room to the south is the Meeting Room and Commander's Room. All the rooms have carpet and a total of 20 fluorescent light bulbs. It could not be ascertained whether these were green or non-green tipped bulbs. No environmental concerns were observed in these rooms.

The Entrance Hallway is adjacently east of the Orderly Room. No environmental concerns were observed in the Entrance Hallway or the main east and west hallway. The Entrance Hallway contained four fluorescent light bulbs and the main hallway contained 28 three-foot green-tipped fluorescent light bulbs.

The Recruiter's Office and the Day Room are located adjacent and east of the Entrance Hallway. The Recruiter's Office has carpeted floor whereas the Day Room contains twelve-inch floor tile. Three floor tiles were damaged in the Day Room. The Recruiter's Office contains eight fluorescent light bulbs and the Day Room contains twenty fluorescent light bulbs.

The Armory building was fairly empty. Ceiling tiles in the building were all Styrofoam and not suspect of ACM. All windows in the rooms may potentially contain asbestos in the window putty. Photographs of the internal view of the site can be found in Appendix F.

5.5 Interviews

Two former employees of the Elk City National Guard Armory were interviewed by telephone in May of 2009. Richard Gay was interviewed on May 14, 2009. Mr. Gay was Staff Sergeant and Section Chief of the M270 Multiple Launch Rocket Systems from 1998 to September 2007. Rodney Vincent was interviewed on May 22, 2009. Mr. Vincent was the head artillery commander of the Elk City Armory and was stationed at the Elk City Armory from 1982 until September 2007 when the Armory went out of operation. Below is the provided the information obtained from both gentlemen.

- The small foot-long metal pipe extending above the ground was used as a safety latch to catch the gate and keep it open.
- No vehicle maintenance was conducted at the Armory. Oil change services, radiator changes, battery changes, and all other maintenance were conducted at Fort Sill located in Lawton, OK. Twenty vehicles were stationed at the Armory. Maintenance of each vehicle occurred every two years.
- There were no known chemical or petroleum spills on the property. The only chemicals used at the facility were for housekeeping purposes.
- The Oklahoma Military Department had the ceiling tiles replaced. Styrofoam ceiling tiles were installed.

- No shooting occurred at the Armory in which military weapons containing lead ammunition were used. The only shooting that may have occurred was from BB guns that didn't contain lead ammunition.
- Within the last ten years the copper gutters have been replaced and new tin and tar was installed on the roof. In 2005 new central heat and air units were installed.
- The 1,000 gallon diesel UST was pulled out in 1995. No leaks or signs of diesel were observed after the UST was removed.

6.0 FINDINGS

Summarized below are the major findings from this Targeted Brownfield Assessment and DEQ's recommendations. The major findings of the highest environmental concern are presented first.

- Suspect ACM was found through the Armory. Window putty observed between the windows externally and internally appeared to be suspect for ACM. The Drill Floor appeared to have ACM in the roof, exhaust pipes in the roof, and the fire door connected to the Maintenance Room. Several of the rooms in the main building east of the Drill Floor contained wrapped TSI utility piping, which is very likely to contain ACM. These rooms included: Hallway #7, Utility Room, Officers Latrine, Enlisted Latrine, Training Room, Locker Room, and the Classroom. The Utility room contained the same kind of exhaust pipes found in the Drill Floor, which were found leading up to the ceiling from the boiler and to the furnace. Twelve-inch floor tile was observed in the entrance of the Classroom and the whole floor of the Day Room. The twelve-inch floor tile is unlikely to have ACM; however, the mastic binding the floor to the floor tile could be suspect for ACM. The suspect ACM inside the Armory constitutes a REC.
- Several areas of the Armory were observed that may contain lead-based paint. Externally, eight cone-like metal structures were observed along the corners of the brick wall next to the overhead doors of the Drill Floor and Maintenance Room. The white paint on these structures was deteriorating and appeared to be suspect for lead-based The metal surfaced doors and overhead doors, internally and externally, are This is especially relevant in the Drill Floor and suspect for lead-based paint. Maintenance Room where the paint has deteriorated. The overhead door frames located at the Drill Floor and Maintenance Room; the fire door located between the Drill Floor and Maintenance Room; and a metal-surfaced window compartment located on the east side of the Drill Floor have suspect lead-based paint. Red primer was observed on the floors of the Maintenance Room and Hallway #7, the fire door, and the overhead doors. A yellow primer painted line formed in a rectangular shape was observed along the Drill Floor. The two primers are suspect for lead-based paint. The Supply Room contained green and white painted steel pipe that could be suspect for lead-based paint. DEQ's contractor will perform a lead-based paint survey to determine the presence of lead-based paint in the building. The suspect lead based paint throughout the building constitutes a REC.

- There may be a potential for mold growth due to the age of the Armory, humidity, and possible water seepage.
- On September 25, 1995, a 1,000 gallon diesel UST was removed and disposed of at the Northern Oklahoma Metals facility, which is a metal scrapping/disposal company. Two confirmation soil samples were collected at the bottom of the excavated pit in the center and east sidewall for the analysis of BTEX and TPH. Both sample results were below the OCC and DEQ Residential soil screening levels for BTEX and TPH.
- One LUST site, In "N" Out Express was reported as being located within the ASTM's minimum search distance of ½ mile of the subject property. The facility is located at 1220 Colorado Avenue approximately 0.43 mile east-northeast of the subject property. Three 6,000 gallon gasoline leaking USTs were removed.
- Fluorescent light bulbs were found in the light fixtures throughout the Armory building.
 The bulbs contain mercury. Some of the light bulbs had green tips and the others did not
 have green tips. Fluorescent light bulbs with green tips are nonhazardous whereas other
 fluorescent light bulbs may be hazardous. Mercury contained in green tipped fluorescent
 light bulbs is not leachable through TCLP analysis, which makes them nonhazardous.
- Four HVAC systems, a furnace, and a boiler were found inside the Armory. The Drill Floor, Maintenance Room, Supply Room, and Utility Room contain the units. There may be a potential for the HVAC systems to contain CFCs. These compounds are used in HVAC systems.
- According to two former employees of the Elk City Armory, there were no known chemical or petroleum spills on the property. The only chemicals used at the facility were for housekeeping purposes.
- One transformer was observed behind the subject property. The transformer appeared to be in good condition. Transformers are known to have PCBs. PCBs are mixtures of chemicals that form clear to yellow, oily liquids, or mixtures that form white, crystalline (sand-like) solids and hard resins. They were used in electrical equipment until their regulation in 1977.
- According to the Oklahoma Water Resources Board Water Well Record database, there are no wells present on the subject property or adjacent properties. One well is reported within 0.5 mile of the Armory. The well is approximately 0.40 mile west of the Armory.
- No National Priorities List NPL or delisted NPL sites, active Comprehensive Environmental Response, CERCLIS site listings, RCRA CORRACTS and non-CORRACTS TSD listings, ERNS list, State-equivalent NPL or CERCLIS lists, or State landfills and/or solid waste disposal sites were found on the subject property or within the ASTM minimum search radii. No archived CERCLIS site listings, RCRA generators, or VCP sites were found on the subject property or the minimum search radii. No Brownfield sites were found on the subject property and the minimum search radii either.

- The Oklahoma Corporation Commission's oil and gas records database did not have any oil and/or gas well records within a mile of the subject property.
- The site is not on any Federal or State IC/EC Registries. The Elk City Armory representatives of the property were not aware of any ICs or ECs on the property.
- The subject property is on the DEQ's Site Cleanup Assistance Program list for environmental cleanup.

7.0 OPINION AND RECOMMENDATIONS

Based on the findings of this assessment, The DEQ recommends that additional investigation be conducted to evaluate areas of the property that may need future clean-up and remediation.

Areas of additional evaluation consist of the following:

- The window putty throughout the Armory building should be tested for asbestos. The Drill Floor roof, exhaust pipes, and fire door connected to the Maintenance Room should be tested for asbestos. Hallway #7, Utility Room, Officers Latrine, Enlisted Latrine, Training Room, Locker Room, and the Classroom all contained wrapped TSI utility piping, which should be tested for asbestos. Exhaust pipes located in the Utility Room should be tested for asbestos as well as any underlying mastic shown where the floor tiles had been damaged inside the Day Room. If ACM is found an asbestos abatement should occur.
- There appears to be several lead-based paint issues in the Armory. It is recommended that additional investigation be conducted at the Armory. It would be beneficial to collect lead wipes to test for lead dust and use an XRF machine to test for lead-based paint. The cone-like metal structures outside the building; metal surfaced doors; overhead doors and frames; fire door; metal-surfaced window compartment located on the east side of the Drill Floor; red primer on the floors of the Maintenance Room and Hallway #7; yellow primer observed along the Drill Floor surface; and painted bare steel pipes as observed in the Supply Room need to be tested for lead-based paint and remediated if analytical test results are above the DEQ action level of 500 mg/kg for lead.

8.0 DATA GAPS

Section 3.2.20 (ASTM 1527-05) defines a data gap as "a lack or inability to obtain information required by the practice despite good faith efforts of the environmental professional to gather such information." No data gaps were found.

9.0 CONCLUSIONS

The DEQ has performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E 1527-05 of *property* located at 609 West E Avenue in Elk City, Oklahoma. Any exceptions to, or deletions from, this practice are described in Section 10.0 of this *report*. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the *property* except for the following: ACM inside the Armory building and lead-based paint inside and outside of the Armory building.

The information provided in this assessment is to assist the City of Elk City in its revitalization planning as well as meet the All Appropriate Inquiry requirement of the landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, better known as Superfund – Ref. 2), as provided in the Small Business Relief and Brownfield Revitalization Act of 2002 (Public Law 107-118, Subtitle B – Ref. 3).

10.0 ADDITIONAL SERVICES

No additional services were provided in this Phase I Targeted Brownfield Assessment.

11.0 DEVIATIONS

No deviations and deletions from E 1527-05 were made for this Phase I site investigation.

12.0 REFERENCES

- 1. U.S. Environmental Protection Agency. (2008). Oklahoma *Brownfield Assistance Agreement (No* #RP96681001-0). Unpublished Document. State of Oklahoma: Oklahoma City, Oklahoma.
- 2. U.S. Environmental Protection Agency. (1980). Comprehensive Environmental Response, Compensation, and Liability Act. (Public Law 96-510). Washington, DC: U.S. Government Printing Office.
- 3. U.S. Environmental Protection Agency. (2002). Small Business Liability Relief and Brownfield Revitalization Act. (Public Law 107-118, Subtitle B). Washington, DC: U.S. Government Printing Office.
- 4. ASTM International. (2005). Water and Environmental Technology: Phase I Environmental Site Assessment E 1527 05. Baltimore, Maryland.
- 5. United States Department of Agriculture http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

- 6. Oklahoma Geological Survey. Mankin, Charles J. (June 1970). *Geology and Earth Resources of Oklahoma*. The University of Oklahoma, Norman, OK.
- 7. Federal Emergency Management Association (FEMA). https://msc.fema.gov.
- 8. State Landfill site list: http://www.deq.state.ok.us/LpDnew/swindex.html.
- 9. Emergency Response Notification System: http://www.nrc.uscg.mil/foia.html.
- 10. EPA NPL list: http://www.epa.gov/superfund/sites/npl/status.htm.
- 11. CERCLIS current and archived sites: http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm.
- 12. RCRA database: http://www.epa.gov/enviro/html/rcris/rcris_query_java.html.
- 13. RCRA NOTIFIERS sorted by county and then city: http://www.deq.state.ok.us/LPDnew/HW/Notifiers/notifiersbycountycity.pdf.
- 14. Sanborn Fire Insurance Maps. Oklahoma Department of Libraries. www.odl.state.ok.us.

13.0 APENDICIES

Appendix A Site Map and Topographic Map

Appendix B Aerial Photographs

Appendix C Flood Insurance Rate Map

Appendix D USDA Beckham County Web Soil Survey

Appendix E Oklahoma Corporation Commission Tank Removal and Closure Report

for the 1000-Gallon Diesel Underground Storage Tank

Appendix F Site Photographs

Appendix G Field Notes

Appendix H Floor Plan

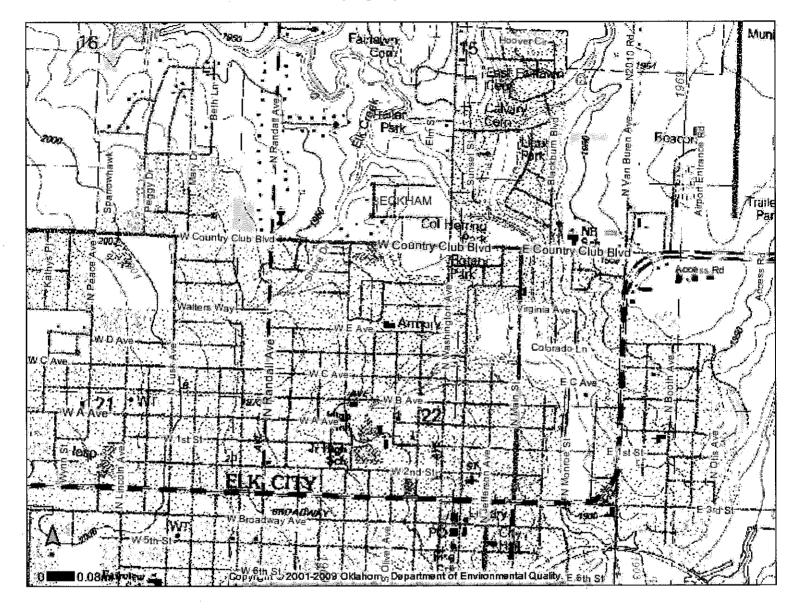
Appendix I Qualification(s) of Environmental Professionals

Appendix A Site Map and Topographic Map

Site Map

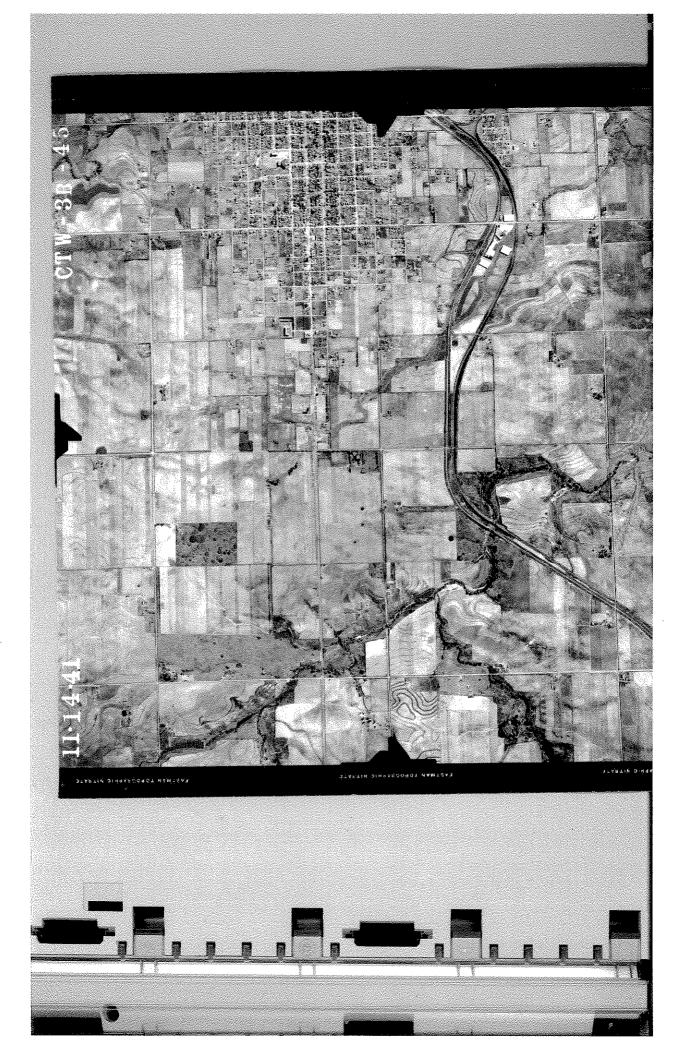


Topographic Map



Appendix B

Aerial Photographs





1995 Aerial Photograph



2008 Aerial Photograph



Appendix C Flood Insurance Rate Map



PANEL 0016D

MAP NUMBER 4000100016D MAP REVISED Federal Emergency Management Agency **DECEMBER 16, 2003**

OTHERWISE	OTHERWISE PROTECTED AREAS (OPAs)			
CBRS areas and OPAs are no	CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.			
a posterior de la company	1% annual chance floodplain boundary		MAP SCALE 1" = 500'	
	0.2% annual chance floodplain boundary	250	0 500 1000	
mpsingsynnepsynnepsyn mpskytreternyssian	Floodway boundary			Ì
	Zone D boundary			Ž L
	CBRS and OPA boundary			
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.		THE REPORT OF THE PROPERTY OF	
~~ 513 ~~	Base Flood Elevation line and value; elevation in feet*		PANEL 0016D	
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*		FR	
*Referenced to the North Arr	*Referenced to the North American Vertical Datum of 1988			
₹	Cross section line		CITY OF ELK CITY,	
(Z)(Z)	Transect line	<u>Ka (a</u>	OKLAHOMA BECKHAM COUNTY	
45° 02' 08", -93° 02' 12"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)			:
4989000м	1000-meter Universal Transverse Mercator grid values, zone 14			
ML5510 $_{ imes}$	Bench mark (see explanation in Notes to Users section of this FIRM panel)	V/G	(SEE WAY INDEA LON TING TANKE LAYOU!)	
• M1.5	River Mile			
			ELK CITY, CITY OF 400010 0016 D	

or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.go This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes 4000100016D MAP REVISED **DECEMBER 16, 2003** Federal Emergency Management Agency

> floodway; to update corporate limits and map format; to change zone designations, December 16, 2003- to add Base Flood Elevations, roads and roads names, and

and Special Flood Hazard Areas.

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject

City Hall, 120 South Jefferson Avenue, Elk City, Oklahoma 73648 (Maps available for reference only, not for distribution.)

Map Repository

FLOOD HAZARD BOUNDARY MAP REVISIONS

May 24, 1974

INITIAL NFIP MAP DATE

FLOOD INSURANCE RATE MAP EFFECTIVE

June 1, 1982

August 29, 1978

June 18, 1976

FLOOD INSURANCE RATE MAP REVISIONS

community.

MAP NUMBER

Appendix D USDA Beckham County Web Soil Survey

Beckham County, Oklahoma

27—Grandfield fine sandy loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 1,000 to 2,500 feet

Mean annual precipitation: 20 to 38 inches Mean annual air temperature: 57 to 64 degrees F

Frost-free period: 185 to 230 days

Map Unit Composition

Grandfield and similar soils: 80 percent

Minor components: 20 percent

Description of Grandfield

Settina

Landform: Sand sheets on paleoterraces
Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Convex

Parent material: Loamy alluvium and/or eolian deposits

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent Available water capacity: Moderate (about 8.2 inches)

Interpretive groups

Land capability (nonirrigated): 2e

Ecological site: Sandy Loam Prairie 23-31" PZ (R078CY110TX)

Typical profile

0 to 10 inches: Fine sandy loam 10 to 14 inches: Sandy clay loam 14 to 52 inches: Fine sandy loam 52 to 65 inches: Fine sandy loam

Minor Components

Grandmore

Percent of map unit: 10 percent

Landform: Sand sheets on stream terraces Landform position (three-dimensional): Tread

Down-slope shape: Convex Across-slope shape: Convex

Ecological site: Deep Sand 23-30 PZ (R078CY014OK)

Devol

Percent of map unit: 6 percent

Landform: Dunes on sand sheets on stream terraces

Down-slope shape: Convex Across-slope shape: Convex

Ecological site: Deep Sand 23-30 PZ (R078CY014OK)

Altus

Percent of map unit: 3 percent

Landform: Paleoterraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear Across-slope shape: Convex

Ecological site: Sandy Loam Prairie 23-31" PZ (R078CY110TX)

Carwile

Percent of map unit: 1 percent Landform: Depressions Down-slope shape: Concave Across-slope shape: Concave

Ecological site: Depressional Upland PE 44-64 (R080AY0990K)

Data Source Information

Soil Survey Area: Beckham County, Oklahoma Survey Area Data: Version 7, Sep 11, 2008

35° 25′ 1"

Natural Resources Conservation Service

NSDA

35° 25′ 1″

0996168 3919400 99° 24' 29" 86, 54, 58. 462800 Map Scale: 1:2,500 if printed on A size (8.5" x 11") sheet, 462450 ..09 .54 .66 .09 .77 .66 0016168 3919700 3919600 3919550 3919650 3919500 3919450 35° 25' 12"

35° 25' 13"

Soil Map—Beckham County, Oklahoma (Elk City Armory)

MAP LEGEND

Area of Int	Area of Interest (AOI)	8	Very Stony Spot
7	Area or interest (ACI)	39 00	Wet Spot
Solls	15 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4	Other
-	Soll Map Units	Special	Special Line Features
Special	Special Point Features	(%) (%)	\alpha \lambda
Э	Blowout	J.	fum)
×	Borrow Pit		Short Steep Slope
×	Clay Snot	Ç	Other
K	Solo faio	Political Features	eatures
*	Closed Depression	0	Cities
×	Gravel Pit	Water Features	tures
-:	Gravelly Spot		Oceans
0	Landfill	, in the second section of the second	Streams and Canals
æ	Lava Flow	Transportation	atlon
큠	Marsh or swamp	‡	Rails
*	Mine or Quarry	}	Interstate Highways
0	Miscellaneous Water	}	US Routes
•	Perennial Water	1 1/4	Major Roads
>	Rock Outcrop	3	Local Roads
+	Saline Spot		
, ,	Sandy Spot		

Severely Eroded Spot

Slide or Slip

Sinkhole

Sadic Spot Spoil Area Stony Spot

MAP INFORMATION

Map Scale: 1:2,500 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map

measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov Coordinate System: UTM Zone 14N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Beckham County, Oklahoma Survey Area Data: Version 7, Sep 11, 2008

Date(s) aerial images were photographed: 6/23/2003

compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting The orthophoto or other base map on which the soil lines were of map unit boundaries may be evident.

Map Unit Legend

Beckham County, Oklahoma (OK009)						
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
19	Dill-Quinlan complex, 1 to 3 percent slopes	4.2	17.2%			
27	Grandfield fine sandy loam, 1 to 3 percent slopes	20.0	82.1%			
28	Grandfield fine sandy loam, 3 to 5 percent slopes	0.2	0.6%			
Totals for Area of Intere	st	24.4	100.0%			

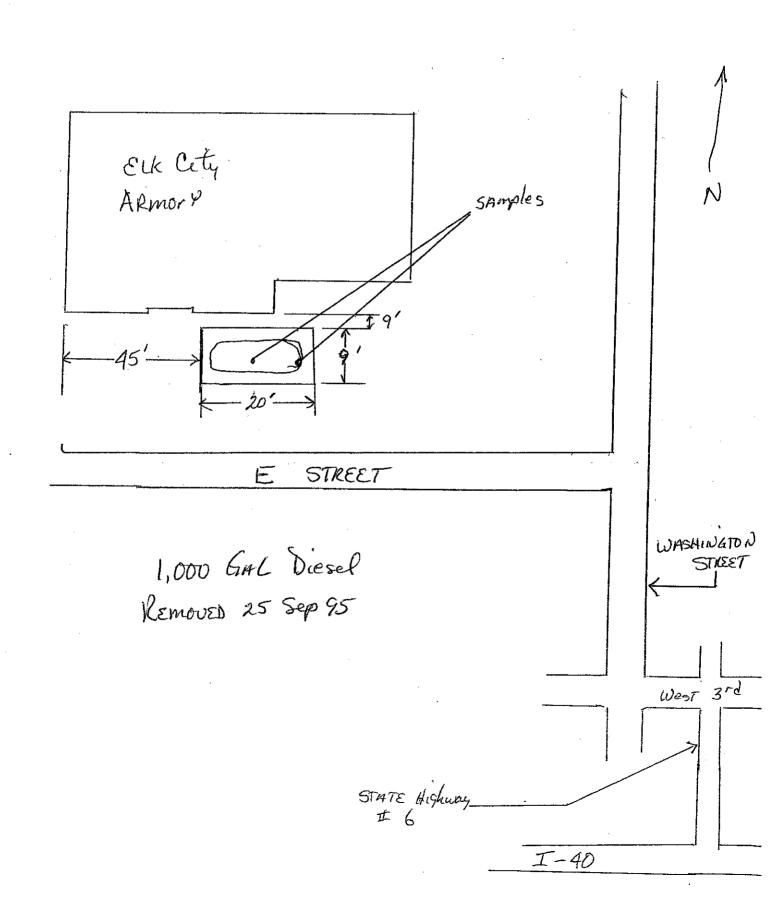
Appendix E

Oklahoma Corporation Commission Tank Removal and Closure Report for the 1000-Gallon Diesel Underground Storage Tank

	STATE USE ONLY
Notification for Underground Storage Tanks	
Notification for Underground Separament Oklahoma Military Deparament Okc. Okc. Okc.	ID NUMBER 0 - 505807
	DATE RECEIVED
TYPE OF NOTIFICATION	A. Date Entered Into Computer
B. AMENOED C. CL	LOSURE B. Data Entry Clark tritials
	attached C. Owner Was Contacted to : Clarify Responses, Comments.
No. of tarsus at facility . INSTRUCTIONS	Clarify Hesponses. Collain-
Please type or point in ink all items except "signature" in section V. must be completed for each location containing undergroups storage more than five (5) tanks are owned at this location, photocopy the following the source of the form.	
GENERALINFO	ORMATION
NetBlantian is required by Federal law for all underground tanks that " Is no in the ground as at May 6, 1986, or that are brought into use star they 6, 1986. The information requested to required by Sestem 2002 of the Research Cancervation and Researcy Act, (RCRA), as accessed. The primary surgess of this noelesses program is to lease and evaluate inserground tanks that store or have some performance research successes. The primary surgess of this noelesses program is to lease and evaluate inserground tanks that store or have some performance research successes. The primary surgess of this noelesses program is to lease and evaluate inserground tanks that some or have some performance in the second	2. service territory. 4. province familiate Sectioning gentering hinest requirement whether (Set. 4. province Section Act of 1958, or the Internative Ligure Province Seates Act of 1978, or which as an invasioning separate facility requirement under Seatestania. 5. surface introductioning, puts, ponde, or happens. 6. sizorn water or weste eatestania systems; 7. Sow-drough process territory. 8. hourd trace or seasemented eatestania systems; 9. sizorage territory eatestania an enterpresent area (sustraces to as or gentlemented in the seasement of the seasement, called, introduction, drift, statis, or territory and a seasement of seasements of the seasement
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IX. DESCRIPTION OF UND	TERGROUND ST	DRAGE TANKS (C	omplete for each t	ank at this locator	a.j
Tank Identification Number () -505807	Tank No	Tank No	Tank No.	Tank No	Tank No
1 Status of Tank					
(mark only one) Currently in Use					
Temporarily Out of Use					
Permanently Out of Use	X				
(A restrict to a constant to	,				
Amendme, a di Information				t	
2. Date of Installation (mo./year)	1857				
3. Estimated Total Capacity (galions)	1,000				
4. Material of Construction	- !				
(Mark all that apply)					
Asphalt Coated or Bare Steel	X				
Cathodically Protected Steel					
Epoxy Coated Steel					
Composite (Steel with Fibergiass)					
Fiberglass Reinforced Plastic					
Lined Interior					<u></u>
Double Walled					
Polyethylene Tank Jacket					
Concrete					
Excavation Liner					
Unknown	L		L	L	
Other, Please specify					
				,	
Has tank been repaired?	ND				
5. Piping (Material)					
(Mark all that apply) Bare Steel	X				
Galvanized Steel					
Fiberglass Reinforced Plastic					
Copper		L			
. Cathodically Protected					
Double Walled					
Secondary Containment					
. Unknown					
Other, Flease specify					
4.	\$2. \$ 2. *				
6. Piping (Type)				<i>i</i> ,	
(Mark all that apply)		, 			
Suction: no vaive at tank					
Suction: valve at lank				<u> </u>	
Prossure			<u></u>	<u> </u>	
Gravity Feed [1
Has piping been recaired?	NO				

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ALPHA ANALYTICAL LABORATORIES 2700 N.W. 39TH STREET OKLAHOMA CITY; OK: 73112

CHAIN OF CUSTODY RECORD

Package Sh	ipped From: [Thlahmal	Wilston D	ept Da	te 27 Sp 95
Address: _	3501 Miles Bluler Cuta	Tary Circ	(e 73111-435	<i>(8)</i>	te: 27 Sp 95
Phone #	425-8334	Fax # <u>425</u> -	857/ Con	ntact: <u>LTC C</u>	nglebritson
Number of	of Package Upo Samples Recei :	yed: 2		P.O. # Person Sampl Sample Type:	ing: ITC Engle Soil
NEMBER	RECEIVING SAMPLE #	DESCRIPT	ΙΟΝ		AAI LOG NUMBER
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Stanley Engineering, Inc. Alpha Analytical Laboratories Division

2700 NW 39th Street

Oklahoma City, Oklahoma 73112 (405) 948-1979 (405) 948-1964 (FAX)

Dr. Keith L. Stanley, P.E., C.LH., Director of Field and Analytical Services

Client:

Oklahoma Military Department

Address:

9501 Military Circle

Oklahoma City, OK 73111-4398

Projects

Req. By:

Elk City

LTC Englebresson

Date Collected:

9-27-95

Date Analyzed: Analysti

10-3-95 Tony LaValle

Received by:

Penny Schmidt

Lab ID	9522	82, 952283
Aedia	Method	Detection

Sample ID	Parameter	Media	Method	Detection Limit	Result	Units
#1 Center	Benzene	Soil	EPA 8020	0.0005	<0.0005	mg/kg
952282	Toluene	Soil	EPA 8020	0.0005	0.0006	mg/kg
	Ethylbenzene	Soil	EPA 8020	0.0005	<0.0005	mg/kg
	Xylene	Soil	EPA 8020	0.0005	<0.0005	mg/kg
	GRO	Soil	EPA 8015(m)	0.1	0.127	mg/kg
	DRO	Soil	EPA 8100	1.0	<1.0	mg/kg
#2 Side 952283	Benzene Toluene Ethylbenzene Xylene	Soil Soil Soil Soil	EPA 8020 EPA 8020 EPA 8020 EPA 8020	0.0005 0.0005 0.0005 0.0005	<0.0005 <0.0005 <0.0005 <0.0005	mg/kg mg/kg mg/kg mg/kg
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Modia: W = Water, WW = Wastewater, DW - Drinking Water, S = Solid, SL = Studge, A = Air

CERTIFICATIONS: OWRB # 2417'; NVLAP # 1568; PROFICIENCY ANALYTICAL TESTING PROGRAM (PAT) 73112001

SEI/AAL is not responsible for any errors resulting from improper or incorrect sampling procedures; errors resulting from atmospheric conditions at the time of sampling or during shipment; or errors resulting from shipping conditions

	Job No
	Date 25 Sep 7 95
Comp	leted By
CERTIFICATE OF DESTRU	CTION
Scrapping/Disposal Company:	Site of Destruction:
Mom	X10 M
HORTHERN OLM METALS	······································
Penn Olla	
Tank Removal Contractor:	
OK MiliTary dept	
3507 Md. Pan Ci-	
Hic oc	
Tank Identification:	,
Tank No.:	
Size:	
Location: Company Elk City	National guard XRMOR
Address	A 1000
City/State Elk CiTy	OK
Destruction Date:	
I certify that the above described tank has the storage of any fluids, and all removed fivere disposed of in accordance with all applifederal regulations.	luids, sludges and the tanks
Title	
Subscribed and Sworn to before me this ion the year	_cay or
Notary PublicMy Commission	Expires:

Sheet____ of____

4/

CANS ACT 2000 DORF EDDLOF ETDLOF \$30.5

	STATE ÚSE ONLY
Notification for Underground Storage Tanks	0 (00007
State Agency Higher and Accress	ID NUMBER 0 5 05801/
TYPE OF NOTIFICATION	DATE RECEIVED 8/5/93 Kg. A. Date Entered Into Computer
	LOSURE B. Data Entry Clerk Initials
A. NEW FACILITY	attached C. Owner Was Contacted to
No. of tanks at facility No. of continuation sheets INSTRUCTIONS	Clarify Responses. Comments
on telegrature" in section V	. This form
Please type or print in ink all items except signature in must be completed for each location containing underground storage more than five (5) tanks are owned at this location, photocopy the fol sheets, and staple continuation sheets to the form.	e tanks. If lowing
GENERALINE	ORMATION
Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended. The primary purpose of this notification program is to locate and evaluate underground tanks that store or nave stored percetum or hazarroous substances. It is expected that the information you provide will be based on reasonably available records, or in the absence of such records, your knowledge, penell, or recollection. Who Must Notify? Section 9002 of RCRA as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means— a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and b) in the case of any underground storage tank in use before November 8, 1984, but no longer is use on that date, any person who owned such tank immediately before the discontinuation of its use. c) if the State agency so requires, any facility that has undergone any changes to facility information or tank system status (only amended tank information needs to be included? What Tanks Are Included? Underground storage tank is defined as any one or more beneath the ground. Some examples are underground tanks storing: 10% or more beneath the ground. Some examples are underground tanks storing: 1. Gasoline, used oil, or deserbed; and 2, industrial solvents, pesticioes. What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from politication are: 1, farm or residential tanks of 1,100 galions or less capacity used for storing rhoot fuel for	3. septic tanks: 4. pipeline facilities (including pathering lines) regulated under the Natural Gas 4. pipeline Safety Act of 1968, or the Hazardous Louid Pipeline Safety Act of 1979 or which is an intrastate pipeline facility regulated under Safet laws. 5. surface impoundments, bits, ponds, or adopons 6. storm water or waste water collection systems. 7. flow-inrough process tanks 8. liquid traps or associated gathering lines directly related to 0.0° gas production and gamering operations. 9. storage tanks situated in an underground area (such as a pasement de 6° mineworking, drift, shaft, or tunnel) if the storage tank situate upon or above the surface of the hoor. What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive substance defined as hazardous in section 101 (14) of the Comprehensive substances defined as hazardous and Liablity Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtre Cidne exception of those substances regulated as hazardous waste under Subtre Cidne exception of those substances regulated as hazardous waste under Subtre Cidne exception of those substances regulated as hazardous waste under Subtre Cidne exception thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenne; and 14.7 pounds per square inch aboutie. Where To Notify? Send completed forms to Cklahoma City, OK 73105 When To Notify? 1. Owners of underground storage tanks in use of that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1996, 2. Owners who bring underground storage tanks into use after May by May 8, 1996, 2. Owners who bring underground storage tanks into use after May by May 8, 1996, 2. Owners who bring underground storage tanks into use 3, 10 the State requires notification of any amendments to facility as ubmitted
I. OWNERSHIP OF TANK(S)	If required by State, give the geographic location of tarks by degrees, minutes, and seconds If required by State, give the geographic location of tarks by degrees, minutes, and seconds
	EXEMPERATE LES ACTIONS OF THE PROPERTY OF THE
Owner Marine (Corporation Individual Piplic Agency or Other Entry) OKIGIOMA MILITARY DEPORTMENT OKE Street Address	(f same as Section I, mark box here
3501 HeliTary Circle	The state of the second of the
Okla. City Ok 73/1/2000	OKKITOWA NATIONAL GUARD ARMORY Street Address (P.O. Box rest acceptable) LOOG (W). AVENUE E.
OK19.	Elk City Ok. 13648
Prone Number (Include Area Cook.	Coursy Municipality

IX. DESCRIPTION OF UND					
Tank Identification Number	Tank No	Tank No	Tank No	Tank No	Tank No.
Status of Tank (mark only one: Currently in Use)					
(mark only one) Currently in Use Temporarily Out of Use					
(Remarkor & 6 outsection X					
Permanentiy Out of Use,					
(Remember to the extension X.) Amendment of Information:					
Americanetto				1	<u> </u>
2. Date of Installation (mo./year)					
3. Estimated Total Capacity (galions)			i	1	1
4. Material of Construction					
(Mark all that apply)					
Asphalt Coated or Bare Steel					
Cathodically Protected Steel Epoxy Coated Steel					
Composite (Steel with Fiberglass)					
Fiberglass Reinforced Plastic					
Linea Interior					
Double Walled					
Polyetnylene Tank Jacket					
Concrete					
Excavation Liner					
Unknown] :	
Other, Please specify				.	
				.	
Has tank been repaired?					
5. Piping (Materia!) (Mark all that apply) Bare Steel					
Galvanized Steel					
Fiberglass Reinforced Plastic					
Copper	4				
Cathodically Protected					
Double Walled					
Secondary Containment					
Unknown					
Other, Please specify					
6. Piping (Type)					
(Mark all that apply)		ļ		1	
Suction: no valve at tank				 	
Suction: valve at tank				{ 	
Pressure				4	
Gravity Feed					
Has piping been repaired?	ŧ] [

X- CERTIFICATION CF COMPLIA	T \ \ C	Tank No.	Tank No	Tank No.	Tank No
k Identification Number	i lank No		•	<u> </u>	
nstaliation					
A. Instalier certified by tank and piping manufacturers					
Installer certified or licensed by the implementing agency				_ <u> </u>	
C. Installation inspected by a registered engineer] <u> </u>		_
D. Installation inspected and approved by implementing agency					
E. Manufacturer's installation check- lists have been completed					
 F. Another method allowed by State agency. Please specify. 					
. Release Detection (Mark all that apply)	TANK IPIP	ING TANK PIP	ING TANK PIE	PING TANK PI	PING TANK PIP.N.S
A. Manual tank gauging					
B. Tank tightness testing	<u> </u>				
C. Inventory controls					
D. Automatic tank gauging		_ =	== -		
E. Vapor monitoring		_	-		
F. Groundwater monitoring				== == ;	
				!	
 G. Interstitial monitoring double waller tank/piping 		-	[
H. Interstitial monitoring/secondary containment		'			
I. Automatic line leak detectors					
J. Line tightness testing		=={ -	═╣┌─┐╎		
v. Other method allowed by					!
Implementing Agency. Please specify.					
3. Spill and Overfill Protection					
A. Overfill device installed					
B. Spill device installed					
OATH: I certify the information concerning	-a installation th	hat is provided in s	ection XI is true to	the best of my be	ilief and knowledge.
OATH: I certify the information concerns	ug installation ti	ter to brosses			
Installer:		·	Signature		Date
Name				Co	mpany

DETACHMENT 2 BATTERY A 1ST BATTALION 171ST FIELD ARTILLERY
OKLAHOMA ARMY NATIONAL GUARD

P.O. BOX 705, ELK CITY, OKLAHOMA 73648-0705

28 July 1993

MEMORANDUM TO Oklahoma Military Department ATTN: 1SG Doyle Balzer, OKDE 3501 Military Circle, OKC, OK. 73111

Subject: Underground Fuel Tank

- 1. The underground fuel storage tank at this unit has been out of service since July 1988 and no fuel has been purchased or pumped since that date.
- 2. Any further questions should be directed to SSG Dennis L Baldock, phone (405)225-2048.

BREGORY LANKFORD

156, FA, OKARNG

Det Commander

ZI OF ESTIFICE

OKEVC BECEINED



STATE OF OKLAHOMA

MILITARY DEPARTMENT 3501 MILITARY CIRCLE OKLAHOMA CITY, OKLAHOMA 73111-4398 405-425-8000 DCTN 940-3210



August 3, 1993

Directorate of Engineering

SUBJECT: Underground Fuel Storage Tank at Elk City, Oklahoma

Oklahoma Corporation Commission Underground Storage Tank Program Jim Thorpe Building Oklahoma City, Oklahoma 73105

The Oklahoma Military Department has permanently taken this tank out of service as of July 1988.

This tank is empty, will not be used again, and will remain in the ground.

Please adjust your records to show this tank permanently out of service.

Point of Contact for this matter is 1SG Doyle Balzer at 405/425-8335.

> Doyle L. Balzer ISG, OKARNG

Construction Consultant

	STATE USE ONLY.		
Notification for Underground Storage Tanks			
OKLANDA Military Department 3501 Military Circle , OKC. C	10 NUMBER 0 - 505807		
TYPE OF NOTIFICATION	DATE RECEIVED A. Date Entered Into Computer		
r	CLOSURE 8. Data Entry Clark Initials		
No. of tarses at faculty No. of communition shee	ts attached C. Owner Was Contacted to		
INSTRUCTIONS	Clarity Responses. Comments.		
Please type or print in ink all items except "signature" in section must be completed for each location containing underground stora more than five (5) tanks are owned at this location, photocopy the tashests, and staple continuation sheets to the form.	following -		
GENERALIN	FORMATION		
NetBlantien in required by Federal law for all sedergravited tenins that "Nev been used, in starty requisited substances sinks Jenery 1, 1974, that one in the present as all files 5, 1986, or that are brought into use after hitry 6, 1986. The information requested by Season \$002 at the Research Comportation and Resourcy Act, (RCRA), as grantied. The privary purpose of the nonfocation program is to best and evaluate interpreted bries and flore or neve stress paralism or received substances. It is expected that the store or neve stress paralism or received. It is nonfocation to be based on receivers. It is expected the domination you grave with the based on receivers. It is expected the description of the stress of the second program of	3. service territore. 4. growner territore final using gestioning brees requirement and territore final field. Province Salety Act of 1958, or the functional Liquid Province Salety Act of 1978, or which is an intraction growner decisivy requirement construction. 5. survince or recommentations, past, generic, of fingerics. 5. survince or recommentations. 7. Early process states. 8. bount response access states. 8. bount response access states. 8. storage sanda seasonal gestioning into a directly response to an or gestioning processes and gestioning gestioning into a directly response to an or gestioning recommentation of a management of the same states and the same states of the same states and the same states of the same same states of the same same same states of the same same same same same same same sam		
I. OWNERSHIP OF TANK(S)	IL LOCATION OF TANKIS		
	2 receivably Blate, give the granging encountered factor by degram (Bathonic California Section 5 Exemples Act. 42, 34, 12 il Anny 46, 34, 1787).		
OKLAHOMA MILITARY DEPARIMENT	Leitude Longitude		
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OK HOMA CUTY, CK 73111-4398	All National Gas Himory		
OKI AHOMA	61 M. Airane E.		
405/425-8334	Elh City, Oh 73648		
4() 1 / 4 / 1 - 2 3 3 4 cm masses (masses and Care)	Supplies -		
	Course		

IX. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)						
Tank identification Number () -505807	Tank No	Tank No.	Tank No	Tank No.	Tank No	
1. Status of Tank (mark only one) Currently in Use Temporarily Out of Use						
Permanently Out of Use (Automotion of Information)	X				·	
2. Date of Installation (mo./year)	1857					
3. Estimated Total Capacity (gairons)	1,000					
4. Material of Construction (Mark all that apply) Asphalt Coated or Bare Steel Cathodically Protected Steel Epoxy Coated Steel Composite (Steel with Fiberglass) Fiberglass Reinforced Plastic Lined Interior Double Walled Polyethylene Tank Jacket Concrete Excavation Liner Unknown Other, Please specify	X					
Has tank been repaired? [5. Piping (Material) (Mark all that apply) Bare Steel	X					
Galvanized Steel Fiberglass Reinforced Plastic Copper Cathodically Protected Double Walled						
Secondary Containment Unknown Other, Rease specify						
Suction: vaive at tank Suction: vaive at tank Pressure Gravity Feed	×					
Has piping been repaired?	ו שא					

Appendix F
Site Photographs



Photo #1: Property entrance



Photo #3: Southwest view



Photo #5: Corner metal siding near an overhead door

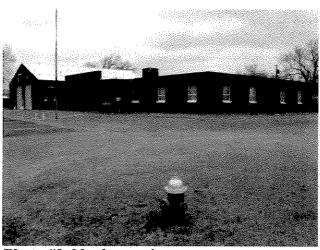


Photo #2: Northwest view



Photo #4: Close-up view of putty on an outside window

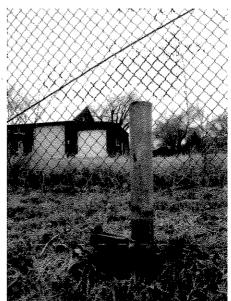


Photo #6: Gate safety latch outside the east side fence

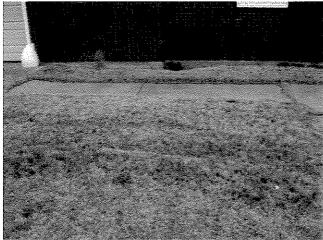


Photo #7: Area south of the sidewalk where a diesel UST was once located



Photo #8: South doors outside the Maintenance Area



Photo #9: South doors inside the Maintenance Area



Photo #10: Maintenance Area



Photo #11: Suspect lead-based paint on an overhead door



Photo #12: Red primer located on the floor of the Maintenance Area

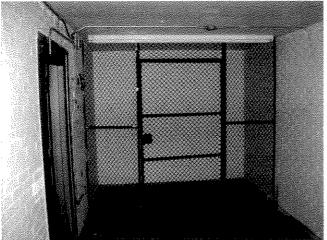


Photo #13: Room inside the Supply Room

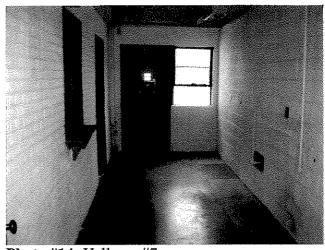


Photo #14: Hallway #7



Photo #15: TSI along the wall of the main building area



Photo #16: TSI across the Officers Latrine

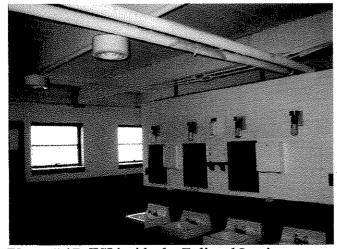


Photo # 17: TSI inside the Enlisted Latrine



Photo #18: Close-up view of the TSI, which may contain ACM

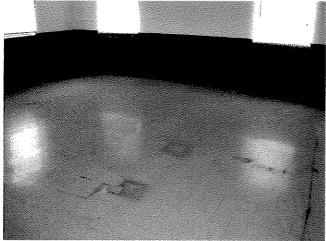


Photo #19: Day Room with 12" x 12" floor tile

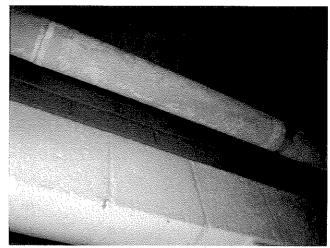


Photo #20: Green-colored metal surface pipe inside the Supply Room

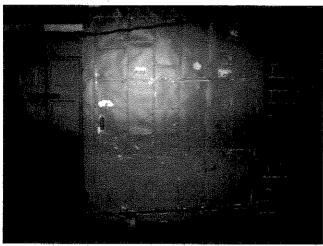


Photo #21: Fire door between the Drill Floor and the Maintenance Area

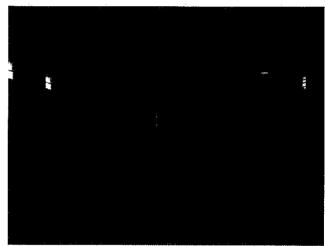


Photo #22: Drill Floor

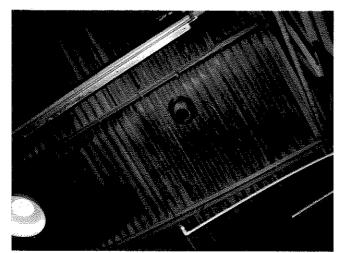


Photo #23: One of four exhaust pipes in the ceiling of the Drill Floor

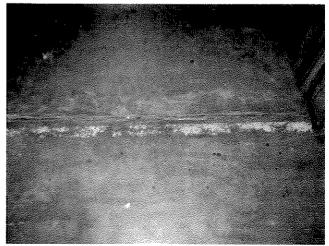


Photo #24: Yellow primer located on the surface of the Drill Floor

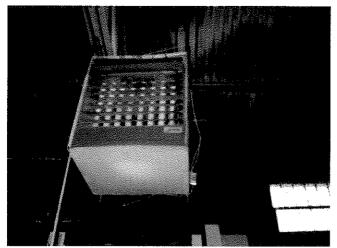


Photo #25: Drill Floor HVAC Unit



Photo #26: Utility Room with TSI near ceiling



Photo #27: Exhaust pipe from the Utility Room gas furnace

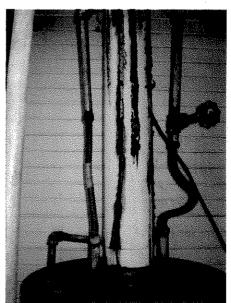


Photo #28: Cylinder pipe wrapping above the boiler

Appendix G

Field Notes

ELK CITY ARMORY VISIT: I MARCH 1995 BUILT: DRILL FLOOR AREA: 1947 MAW BLDG: 1956 exhaust Pipe asherba exhaust green pipe exhaust) 2000 Whon SECTION ROOMS roof in steel Foot leam hape asbestos) overledite ELAMMABLE MATERIALS STORAGE DRILL_FLOOR stee! 4 windows N / 3 Windows CABINET VEHICLÉ PARKING Fire REA HYAGINIT Poor patches of point batt 1 O verked overheadload paint Door PUMP UST SUF Frod Eeilin ROOM Door REVINOR white ENL BTED LATE Vault 0 4 apeen SHOWER abo MIG 4 Hluse 12 thor 28 POL 3 ofeen Training room ROOM STORAGE dieer #9B AREA CDR 4 Flw ROOM #9 344 ROOM #5 Carpeted 1383 \$ 3953 ROOM COMPLETED #9A FRONT DOOR 4 fluor PYC ENTRANCE HALLWAY LOCKER ROOM ROOM #4 carpet RECRUITER'S OFFICE PLON Ke non 500m #2 10 chor 16 fluor 0 - FLOOR DRAIN may bove lina CLASSROOM ROOM #3 cailing tile 2 Como 6

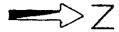
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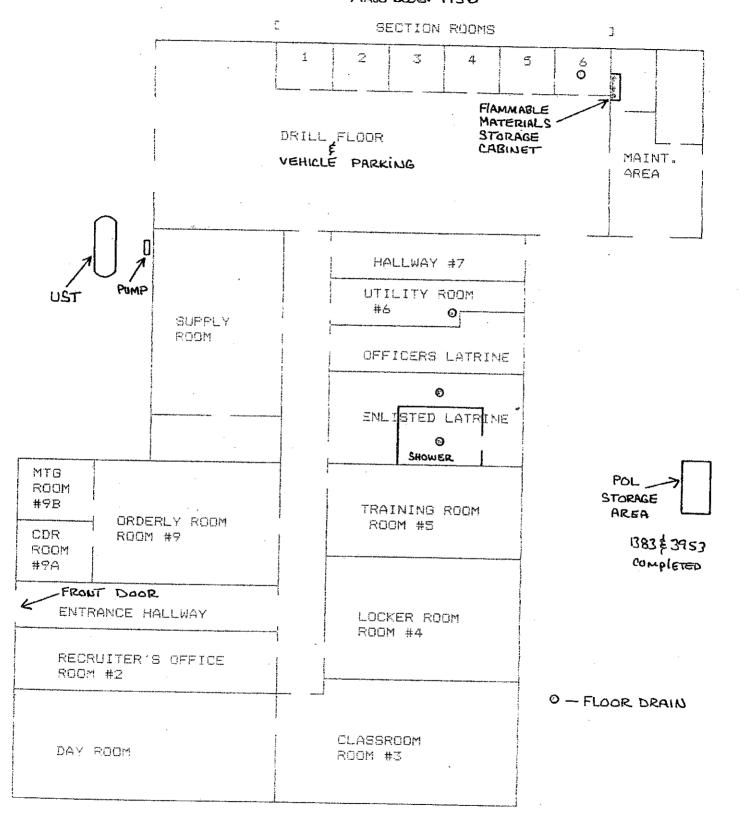
Appendix H Floor Plan

ELK CITY ARMORY

VISIT: I MARCH 1995

BUILT: DRIVI FLOOR AREA: 1947 MAN BUDG: 1956





Appendix I

Qualification(s) of Environmental Professionals

Environmental Professional Qualifications

Jonathan Reid holds a Bachelors Degree in Environmental Science with an emphasis in Natural Resources and a Minor in Soil Science from Oklahoma State University. Mr. Reid has 6 years experience in environmental sampling, remediation, and technical studies. He is an Environmental Programs Specialist III with the Land Protection Division of the Oklahoma Department of Environmental Quality. His responsibilities include: project management of Brownfield/Voluntary Cleanup Project (VCP) sites, fuel spill sites, conducting Targeted Brownfield Assessments, and assisting other project managers on technical activities at other Brownfield/VCP and National Priorities List sites as needed.

Rita R. Kottke, Ph.D., holds a Doctorate in Environmental Science from Oklahoma State University. She is an Environmental Programs Manager with the Land Protection Division of the Oklahoma Department of Environmental Quality. She functions as the DEQ's Brownfield Coordinator, Brownfield Cleanup Revolving Loan Fund Contact, Superfund Site Redevelopment Contact, Superfund Emergency Response Contact, Land Revitalization/Reuse Contact, and as a liaison between the state, EPA, and local communities. Her responsibilities also include acting as technical project manager at various Voluntary Cleanup and Superfund sites within the state. She has been with the agency for sixteen years, working in the Superfund and Brownfields Programs. She has sixteen years experience performing site assessments of real property. She was heavily involved in the formulation of the Brownfields Program's implementing rules, the negotiation of DEQ's Brownfields Memorandum of Agreement (MOA) with EPA, and the development of the Brownfield Cleanup Revolving Loan Fund Grant Proposal.

Heather Mallory holds a Bachelors and Masters Degree in Environmental Science from the University of Oklahoma. Mrs. Mallory has 7 years experience in environmental sampling and remediation. She is an Environmental Programs Specialist with the Land Protection Division of the Oklahoma Department of Environmental Quality. Her responsibilities include: project management of the Tar Creek Superfund Site, conducting and reviewing Targeted Brownfield Assessments, and project management of remediation and sampling of abandoned hazardous waste sites and National Guard armories across the State of Oklahoma.